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(54) **Shaver sweeping brush.**

(57) A cleaning brush for a shaver whereby said cleaning brush comprises a substantially plate-like main member (21) divided into a first (21a) and a second half (21b), said first and second halves (21a, 21b) being coupled on the side of their one surfaces by a hinge member (22) with their side faces being substantially adjacent to each other, said first half (21a) being provided at the side face thereof with bristles (23) extending perpendicularly to said side face (31a), said second half being formed in the other surface (31b) thereof with a recess which opens at the side face thereof to accommodate said bristles (23). Said cleaning brush further comprising holding means provided on the other surfaces of said first and second halves (21a, 21b) and on a mounting surface, respectively, for cooperating with each other to detachably mount said main member (21) on said mounting surface.

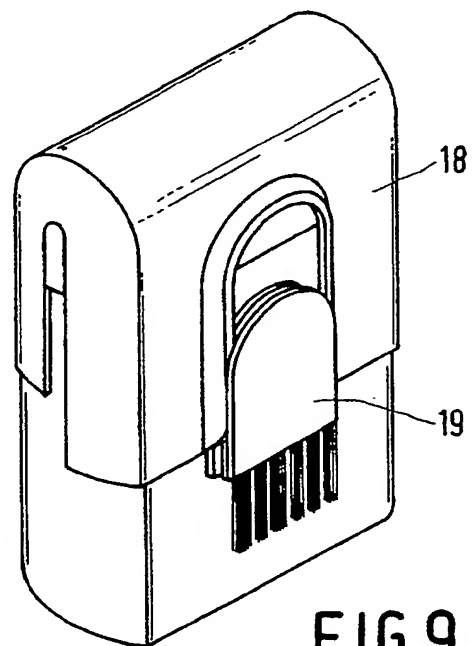


FIG. 9

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horizontally extended to form a protrusion 25. The spring portions 27 are formed at both ends of the side surface 31a opposite to the second half part 21b so as to outwardly extend at a certain angle. The inclined surface of the second half part 21b has a concave portion 26 which is formed in a portion at a distance from the first half part 21a so that a finger tip can be placed therein.

When the sweeping brush 20 is not used, as seen from the Figs. 1 and 3, the brush filling 23 is completely covered with the first half part 21a and thus not at all exposed to the outside. When the brush 20 is used, as shown in Fig. 5, the first half part 21a is rotated in the direction shown by the arrow A through the hinge member 22. In this case, the first half part 21a and the second half part 21b are used as a tab of the sweeping brush 20.

A description will now be given of the method of fitting the sweeping brush 20 to the surface of the shaver.

Fig. 6 shows a state where the sweeping brush 20 in accordance with the present invention is attached on a part of the surface of the side wall of a protection cap 29, which is detachably provided on the shaver body 28 for the purpose of protecting the body 28.

The protection cap 29 has a concave portion 30, which is provided on the surface of the side wall of the protection cap 29 and which has a circular cross-sectional shape and a substantially uniform depth in correspondence with the shape of the sweeping brush 20. The protection cap 29 also has another concave portion 30' which is provided in a part of the concave portion 30 so as to horizontally extend from the bottom of the concave portion 30 in correspondence with the protrusion 25 of the sweeping brush 20 (refer to Fig. 7). In a state where the sweeping brush 20 is fitted to the protection cap 29, the protrusion 25 is engaged with the concave portion 30' so as not to be exposed to the outside, as shown in Fig. 6 which shows the appearance of the protection cap 29.

In a state where the sweeping brush 20 is engaged with the surface of the protection cap 29, i.e., in a state where the first half part 21a and the second half part 21b are substantially on the same plane, the spring parts 27 produce elastic force so as to outwardly push both half parts 21a, 21b. The periphery of the member 21 (particularly, the second half part 21b) is therefore brought into pressure contact with the periphery of the concave portion 30 so that the sweeping brush 20 is tightly engaged in the concave portion 30 of the protection cap 29 and fixed therein.

The sweeping brush 20, which is fixed, can be easily removed by placing a fingertip in the concave portion 26 and separating the second half part 21b from the concave portion 30 against the elastic

force of the spring parts 27.

Although the sweeping brush has a circular cross-sectional shape in the above-described embodiment, the cross-sectional shape may be any one of polygons such as a quadrangle, hexagon and other shapes as far as the shape has the two half parts connected to each other by a hinge structure.

Although the member 21 of the sweeping brush preferably has a peripheral portion downwardly inclined in the outward direction so that the surface is smooth when the brush is fitted to the shaver body, the member 21 need not have an inclined surface, for example, the peripheral portion may be flat over the entire surface.

In addition, the first half part, the second half part, the hinge member and the spring part, which comprise the sweeping brush, need not be integrally formed. For example, a sheet-like flexible member, which forms the hinge member, may be fitted on the upper surfaces of the first half part and the second half part, which are separately molded, or another hinge structure may be provided.

Although the above-described embodiment concerns an example in which the sweeping brush is engaged in the concave portion provided in the protection cap, the concave portion is not limited to a part of the protection cap, and a concave portion may be provided in any portion of the surface of the shaver body as far as the concave portion allows the sweeping brush to engage therein and has a sufficient space. In regard to the method of holding the brush, a convex portion is provided on the bottom of each of both half parts of the sweeping brush member 21, and a concave portion is provided on the surface of the protection cap, to which the brush is fitted, so that the concave and convex portions are engaged with each other for holding the brush. A magic tape may be used for holding the sweeping brush by the fitting surface of the protection cap or the like in place of the concave and convex portions. When such a holding means is used, since there is no need for providing the spring parts, it is unnecessary to provide the gap between the opposite side surfaces of the first and second half parts.

Fig. 1 is a plan view of a cleaning brush according to the invention;

Fig. 2 is a bottom view of the cleaning brush of Fig. 1;

Fig. 3 is a side elevational view of the cleaning brush of Fig. 1;

Fig. 4 is a cross sectional view of the cleaning brush taken along the line IV-IV of Fig. 1;

Fig. 5 is a perspective view of the cleaning brush of Fig. 1 wherein the first half of the main member is open;

Fig. 6 is a perspective view of a shaver, to a

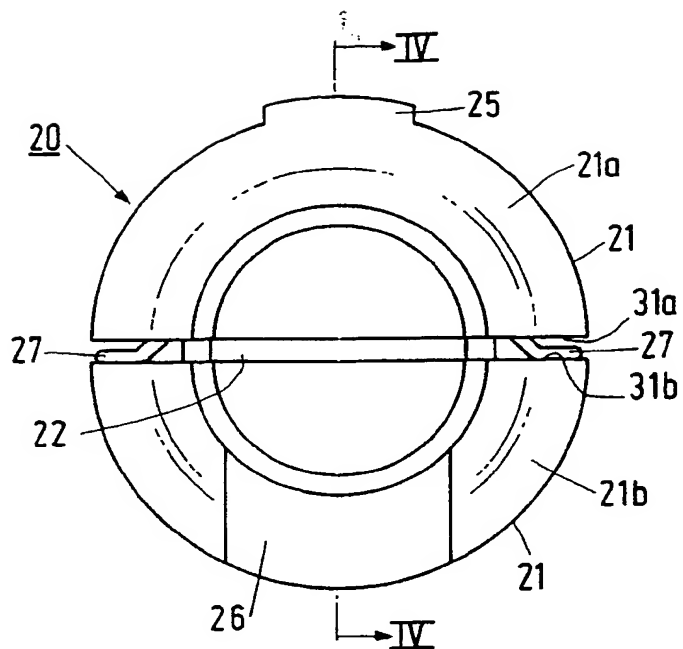


FIG. 1

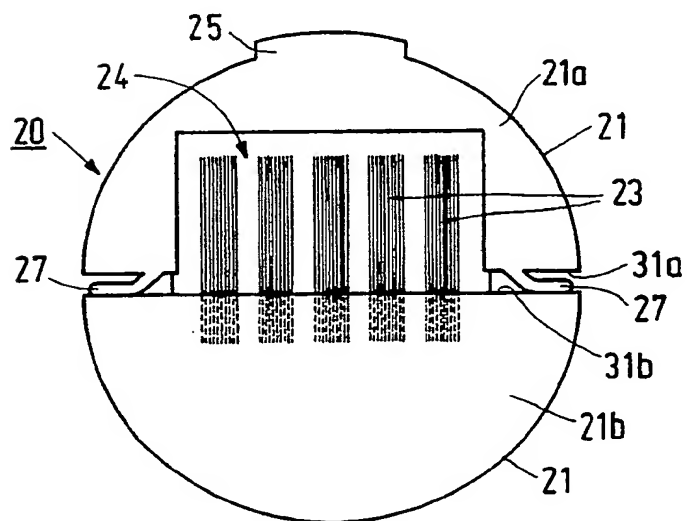


FIG. 2

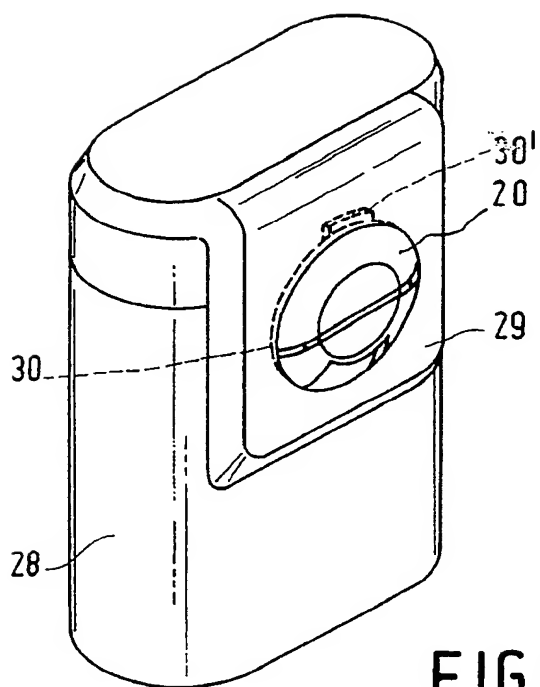


FIG. 6

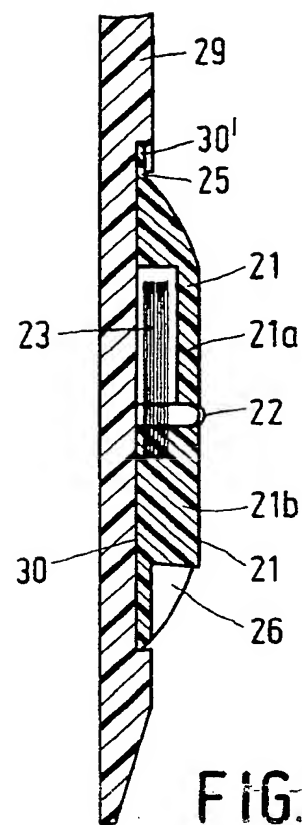


FIG. 7

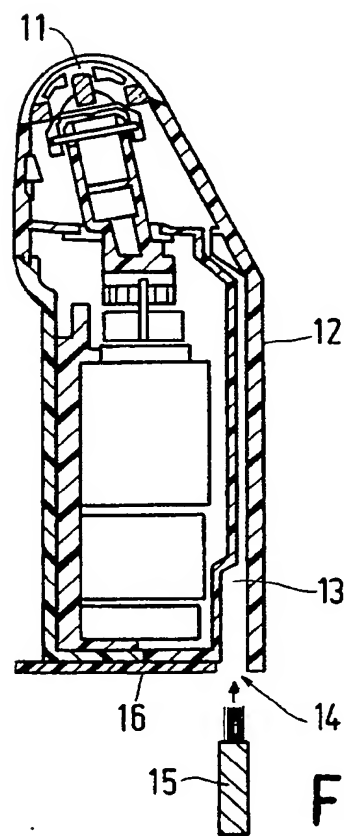


FIG. 8

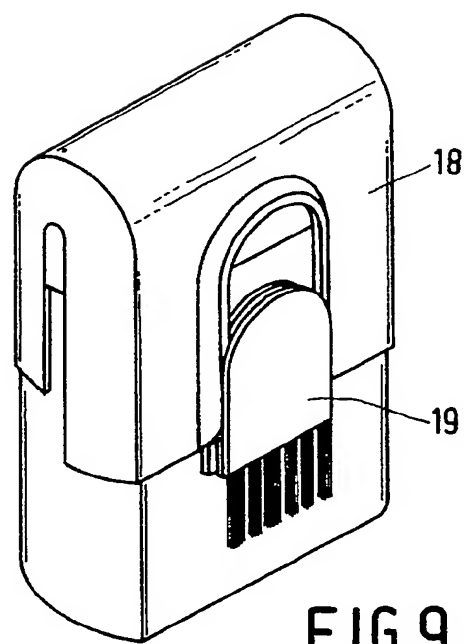


FIG. 9